REMARKS

The present application was filed on November 10, 1999 with claims 1-20. In the outstanding Office Action dated July 2, 2003, the Examiner: (i) rejected claims 1, 5-7, 15, 19 and 20 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,649,060 to Ellozy et al. (hereinafter "Ellozy"); (ii) rejected claims 2-4 under 35 U.S.C. §103(a) as being unpatentable over Ellozy, and further in view of the Background of the Invention.; (iii) rejected claims 10-13 under 35 U.S.C. §103(a) as being patentable over Ellozy in view of U.S. Patent No. 5,778,361 to Nanjo et al. (hereinafter "Nanjo"); (iv) rejected claims 8 and 9 under 35 U.S.C. 103(a) as being unpatentable over Ellozy in view of U.S. Patent No. 5,794,249 to Orsolini et al, (hereinafter "Orsolini); and (v) rejected claim 13 under 35 U.S.C. 103(a) as being unpatentable over Ellozy.

Regarding the rejection of claims 1, 5-7, 15, 19 and 20 under 35 U.S.C. §102(b) based on Ellozy, Applicants respectfully assert that Ellozy fails to teach or suggest all of the limitations in said said claims, for at least the reasons presented below.

It is well-established law that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Applicants assert that the rejection based on Ellozy does not meet this basic legal requirement, as will be explained below.

The present invention, for example, as recited in independent claim 1, is directed toward a method of processing audio-based data associated with a particular language. The method comprises the steps of: (i) storing the audio-based data; (ii) generating a textual representation of the audio-based data, the textual representation being in the form of one or more semantic units corresponding to the audio-based data; and (iii) indexing the one or more semantic units and storing the one or more indexed semantic units for use in searching the stored audio-based data in response to a user query.

As pointed out in Applicants' background section (e.g., pages 1 and 2 of the present specification), Ellozy is a <u>word</u>-based indexing system and in such <u>word</u>-based indexing systems, before the searching can be started, a vocabulary and a language model based on known words must be prepared. Thus, by definition, there are always words that are unknown to the system.

Unfortunately, the searching mechanism can only work with words resulting in a good language model score, i.e., known words. Also, for most of the Asian languages, including, e.g., Chinese, Japanese, Korean, Thai, and Vietnamese, word boundaries neither exist in printed form, nor in computer text files. Thus, <u>word</u>-based indexing and searching methods can not be applied to these languages. Thus, the invention proposes an indexing and searching approach that is not <u>word</u>-based but rather is <u>semantic unit</u>-based, as is recited in the claims.

For example, as stated in the present specification at page 2, lines 15-21, <u>semantic units</u> are defined as small, preferably the smallest, units of a language that are known to have semantic meaning. Examples of semantic units that may be used are <u>syllables</u> or <u>morphemes</u>.

Ellozy does not disclose indexing or searching based on <u>semantic units</u>, as expressly recited in the claim invention. Indexing and searching in Ellozy is clearly based on <u>words</u> only, e.g., see steps 740 and 750 of FIG. 7 ("storing index words," "comparing index and recognized words"). This is also made abundantly clear at column 7, lines 13-20 ("indexing is done . . . by choosing key words or phrases").

Applicants point out that the fact that the present specification states (page 2, lines 22-25) that a morpheme is a semantic unit, and that a morpheme may be a part of a word, or a word, such as the three units in the word "friendliness," that is "friend-" (free morpheme), "li-," and "ness" (bound morphemes), does not mean that semantic unit-based indexing, as in the invention, is not patentable distinguishable over word-based indexing, as in Ellozy. This is because a "morpheme" encompasses more than a word, i.e., encompasses syllables, groups of syllables, consonants attached to syllables, etc. (see page 3, lines 1 and 2, of the present specification). Also, in the given example, "friend" is functioning as a semantic unit of the word "friendliness" and not specifically as the word "friend."
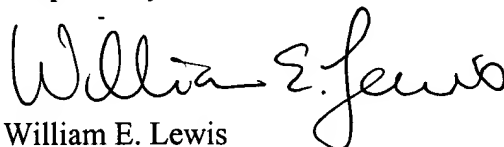
For at least the above reasons, Applicants respectfully assert that independent claims 1, 19 and 20 are patentable over Ellozy. Also, not only due to their dependence on claim 1, but also because such claims recite patentable subject matter in their own right, Applicants respectfully assert that dependent claims 5-7 and 15 are patentable over Ellozy. Withdrawal of the §102(b) rejection is therefore respectfully requested.

Regarding the rejection of claims 2-4, 8-14 and 16-18 under 35 U.S.C. §103(a) based on Ellozy alone and in combination with the background section, Nanjo and Orsolini, Applicants respectfully assert that such rejections are deficient for at least the reasons given above with respect to independent claim 1. Further, Nanjo and Orsolini fail to remedy the deficiencies. Also, despite the assertion to the contrary at page 4 of the Office Action, Applicants do not use the terms "morpheme" or "syllable" any where in the background section. Lastly, the use of Ellozy alone in a §103(a) rejection is not only deficient for the reasons given above, but the rejection is conclusory and unsupported by any evidence of record. Withdrawal of the §103(a) rejection is therefore respectfully requested.

Applicants present for consideration new claims 21-29. Support for such claims may be found throughout the present specification, e.g., pages 6-15. It is respectfully asserted that such claims are patentable for at least the reasons given above.

In view of the above, Applicants believe that claims 1-29 are in condition for allowance, and respectfully request favorable reconsideration.

Respectfully submitted,

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